

# Preface

This volume contains the papers presented at the 19th DGLR/STAB-Symposium held in Munich, Germany, 4–5 November 2014 and organized by the Institute of Aerodynamics and Fluid Mechanics of the Technische Universität München. STAB is the German Aerospace Aerodynamics Association, founded towards the end of the 1970s and DGLR is the German Society for Aeronautics and Astronautics (Deutsche Gesellschaft für Luft- und Raumfahrt - Lilienthal Oberth e.V.).

The mission of STAB is to foster development and acceptance of the disciplines “Aerodynamics and Fluid Mechanics” in Germany. One of its general guidelines is to concentrate resources and know-how in the involved institutions and to avoid duplication in research work as much as possible. Nowadays, this is more necessary than ever. The experience made in the past makes it easier now to obtain new knowledge for solving today’s and tomorrow’s problems. STAB unites German scientists and engineers from universities, research establishments and industry doing research and project work in numerical and experimental fluid mechanics and aerodynamics for aerospace, ground transportation and other applications. This has always been the basis of numerous common research activities sponsored by different funding agencies.

Since 1986 the symposium has taken place at different locations in Germany every 2 years. In between, STAB workshops regularly take place at the DLR in Göttingen. The changing meeting places were established as focal points in Germany’s Aerospace Fluid Mechanics Community for a continuous exchange of scientific results and their discussion. Moreover, they are a forum where new research activities can be presented, often resulting in new, commonly organized research and technology projects.

It is the tenth time that the contributions to the symposium are published after being subjected to a peer review. The material highlights the key items of integrated research and development based on fruitful collaboration of industry, research establishments and universities. The research areas include airplane and ground vehicle aerodynamics, multidisciplinary optimization and new configurations, turbulence research and modelling, laminar flow control and transition, rotorcraft

aerodynamics, aeroelasticity and structural dynamics, numerical and experimental simulation including test techniques, aeroacoustics as well as biomedical and convective flows.

From some 94 lectures presented at the symposium, 77 are included in this book.

The Review-Board, partly identical with the Program-Committee, consisted of

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Nevertheless, the authors sign responsible for the contents of their contributions.

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